STATEMENT OF WORK

1.0) General

1.1) The contract shall provide boat services for the MH-60R ARPDD (Automatic Radar Periscope Detection and Discrimination) Upgrade program's shore test scheduled for August 2009 until March 2010. This large boat will be used by the program to deploy and retrieve large targets such as SPAR buoys, wave rider buoys and target buoys tethered to confusion targets such as 5 gallon paint can, 55 gallon drum and reflectors.

1.2) The originating port to begin the program shall be on Oahu. The Government requires the ship to be free for the time-frame between 8/24/2009 through the end of February or early March 2010. During this time frame, the Government requires specific deployments as detailed in Appendix A to this Statement of Work. The Government is aware that during this timeframe the vessel may be used by the Contracting entity for previously scheduled and emergency deployments. Any such "other" deployments shall be coordinated between the Governments Technical Representative and the Contractor Point of Contact.

1.3) Buoys and targets will be strategically place during week long engagements exercises over two 60 day spans of data collection off the Island of Kauai.

1.4) The Government will be responsible for shipment and delivering the equipment to the port and dock location specified by the contractor. The contractor will be responsible for loading all required deployment equipment aboard the ship.

1.5) OPTION: During the time period of November 1st through December 15th, the MH-60R project will be teaming up with another Navy (OPNAV ZIRCON III) project to collect data for 7 continuous 24 hour days on the west side of the Island Kauai. Ten scientist and engineers will be on board during this operation. Planning for this event is still on-going and exact time frame will depend on a high valued Navy Target that is being requested.

2.0) Background.

2.1) The Navy is planning for an extensive Shore Test to be conducted off of the Island in Kauai from August 2009 through March 2010. The purpose of this Shore Test is to collect data for the purposes of developing an advanced radar mode for a Navy Helicopter.

2.2) The Shore Test is going to be executed by installing the radar in a test trailer and placing the radar trailer on a cliff overlooking the water. To mature this radar it is necessary to collect a large amount of data on special targets that are deployed in the water from the support boat. Figure 1 is a picture of the SPAR buoy that has been developed for this test. Three of these SPAR buoys will be deployed during every data collection day. In air weight for the SPAR Buoy is 400 lbs and air weight with ballast

tank full of water is 1200 lbs. Figure 2 illustrates these Buoys being deployed for another Navy test in the Bahamas.

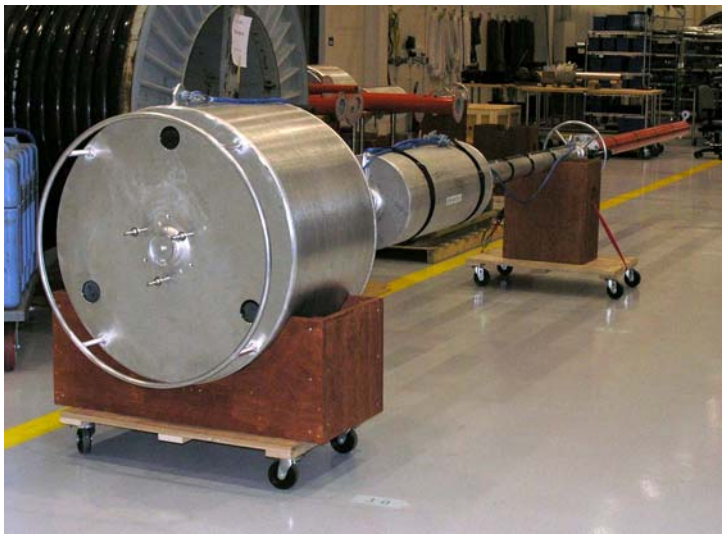

Figure 1. SPAR Buoy

2.3) Figure 3 is a picture of the Sea State measurement buoy that will also be deployed every data collection day. In addition 6 small buoys like the one shown in Figure 2 (small buoys in the foreground) will all also be deployed. The location of all of these buoys is measured with GPS instrumentation on each buoy. This GPS position data will be transmitted to appropriate receivers and recorders that will be installed on the support boat. The GPS position data is used for two purposes: 1) buoy location data needed for processing the radar data and 2) to help keep track of each buoy location while it is the water to facilitate buoy recovery at the end of the data collection day. A crane is required for deployment of the SPAR and Waverider buoys.

3.0) Specific Requirements

3.1) Test Location: During the Test, the Radar will be located at two different sites: Throughout this Document "Lihue Airport" refers to information and test issues pertaining to a 100-foot site east of the Lihue Airport runway. The "PMRF Test Site" refers to information and test issues pertaining to a 100-foot concrete pad that is located to the North of Nohili point.

3.2) Schedule:

a) The following schedule is tentative because the exact details are subject to change depending on factors such as weather conditions, sea states, submarine services and radar/equipment failure. Every effort is being made to ensure that any equipment or radar failure can be quickly fixed. The estimated start date is 24 August 2009. The estimated number of number of data collection days is 83 with 5 days of transit and 32 down days.

b) The estimated location and schedule are as follows:

August to October (48 Data Collection Days)
- Radar operating from a cliff off East of Lihue Airport.

November (17 contiguous Data Collection Days)
- Radar operating from a cliff North of Nohili point.

January (18 Data Collection Days)
- Operate at Lihue Test Site
- February TBD, possible 5 days.

c) A normal data collection week will consist of 5 data collection days. There may be some exception in the case of higher sea states when data collection will continue as long as the seas are high.

Figure 2. Shore Test Targets

Figure 3. Waverider Buoy Needed for Sea State Measurements

3.3) Buoy Support Personnel: The Navy will provide three technicians to be aboard the support boat to help deploy and recover the buoys, buoy maintenance, man communication gear and for buoy position data reduction.

3.4) Electronic Equipment/Laboratory Space: The deployment will require operation of laboratory/electronic/data recording equipment including a desk for data analysis. The vessel shall include air conditioned equipment/laboratory space to work for maintenance of SPAR Buoys and monitoring GPS information provided by SPAR buoy and Target buoy. This space should include a desk with enough space for a PC or laptop.

3.5) Additional Requirements:

a) The vessel should be designed for and successfully operated in extreme sea conditions since the project is seeking high sea states. Hull shape and internal ballasting tanks should provide extreme stability in all sea states. Additionally, its navigation, communication and weather observation equipment should meet and exceed all current ocean-going requirements.

b) Equipment resident on vessel should be specifically designed for deployment/retrieval of heavy objects. This shall include a crane with a minimum capacity of 2,000 pounds. The crane shall be capable of side and stern deployment. All systems should be serviceable, operational, and redundant.

c) Accommodations on board should include hard bunks for ship crew and up to 10 deployment personnel.

4.0 Ship (Vessel) Requirements:

4.1) The vessel shall be capable of successful operation in extreme sea conditions with a hull shape and ballasting tanks to provide extreme stability in all sea states. The Government desires a vessel between 130 to 150 feet long with a beam of between 25 and 35 feet. It is desired that the vessel have endurance for up to 80 days continuous operations and a speed of up to 20 knots.

4.2) Specific power requirements shall include at least two generators each rated at least 585KW. These ship service generators shall be capable of being paralleled and provide 480 VAC, three phase power. 208 VAC power is required for the Instrumentation Van and can be supplied from one of the circuits used to power ships equipment that is being removed for the exercises.

4.3) The deck space shall be sufficient for operation, storing and movement of up to eight (8) SPAR buoys, twelve (12) target buoys and (1) wave rider buoy. The deck space should also be sufficient to carry a 20 foot Instrumentation Van.

4.4) The vessel shall include air conditioned equipment/laboratory space to work for maintenance of SPAR Buoys and monitoring GPS information provided by SPAR buoy and Target buoy. This space should include a desk with enough space for a PC or laptop. The deck should have clear working area of approximately 85 feet by 20 feet.

4.5) The vessel shall have all normal ship to shore capabilities to include: navigation, communications and weather observation equipment that meet or exceed all current ocean-going standards and requirements.

4.6) Equipment resident on the vessel shall include crane(s), winches(s) and gear specifically designed for deployment and retrieval of heavy objects. All systems shall be serviceable, operational and redundant.

4.7) The vessel shall be of a size to comfortably berth its crew and up to an additional 10 program deployment (Navy/Government) personnel. Sleeping quarters shall be heated/air conditioned.

4.8) The contractor/vessel shall be capable of supplying fresh water for drinking and bathing for the duration of the deployment.

4.9) The crew shall include an experienced Captain and Chief Engineer with additional crew members to provide for a safe comfortable environment including providing all sustenance for the duration of the required deployments. The crew shall also be sufficient to provide assistance and have experience with deploying and recovering large objects in deep water.

5.0 Service Vessel: The ship shall include a transport vessel to enable deployment personnel the opportunity to travel ashore at times of 24 hour operation or when the ship cannot be docked at port. A 28-foot Zodiac "Hurricane" Rigid Inflatable Boat (RIB) with center console and full instrumentation for open-ocean operations (Radar, GPS, VHF) OR EQUIVELENT needs to be available at all times. This RIB should be resident on the ship with seating for at least six passengers and have a minimum top end hull speed of 30 knots.

6.0 Point of Contact: The contractor shall provide a point of contact who shall be available to discuss work performed and or service provided under this contract during the normal working days and transit and down days. The point of contact shall be able to read, write and speak English fluently.

7.0 Estimated Deployment Summary

Between anticipated dates of 24 August, 2009 through the end of February beginning of March 2010, the Navy has a Service Boat requirement to support data collection for radar development. The total amount of support days can be as high as 84 data collection days and as low as 75 data collection days. A good number to use for the basis of daily bid rate is 80 data collection days. The daily bid rate shall be all inclusive and include all sustenance and accommodation for specified deployment personnel, fuel and all ancillary fees such as port and wharf fees. For summary details see Appendix A below.

Appendix A
Shore Test Large Boat Requirement Summary

7.1. Lihue Airport—Period 1 (25 August through 29 October)

1. Start Deploying Targets on 25 August.
2. This requires a Transit for Oahu to Kauai on 24 August.
3. Continue operations 5 days a week through 29 October.
4. Three (3) deployment (Navy/Contractor) personnel.

The Large Boat Support required for this period is summarized in Table 1 below:

Boat Operation	Dates	Total Count		
		Data Col.	Transit	Down Day
Transit	**24 August**		**1**	
Data Collection	**(25-28)+(31) Aug.—(1-4) + (7-11)+ (14-19)+(21-25)+(28-29) Sept.—(1-2)+(5-9)+(12-16)+(19-23)+(26-29) Oct,**	**48**		
Down Day	**(29, 28) Aug.—((5, 6)+(12, 13)+(19. 20)+(26, 27) Sept.—(3, 4)+(10, 11)+(17, 18)+(24, 25) Oct.**			**18**

Table 1. Large Boat Utilization Summary for the First Lihue Test Period

7.2. PMRF (30 October to 24 November)

1. Start Deploying Targets on 2 November
2. This requires a Transit East side of Kauai to the West side of Kauai some time between 30 October and 1 November.
3. Continue operations 5 days a week through 24 November.
4. Transit from Kauai to Oahu 25 November.
5. Three (3) deployment (Navy/Contractor) personnel

The Large Boat Support required for this period is summarized in Table 2 below:

Boat Operation	Dates	Total Count		
		Data Col.	Transit	Down Day
Transit	**30 or 31 October or 1 November 24 November**		**1 &1/4**	
Data Collection	**(2-6)+(9-13)+ (16-20)+(23-24) November**	**17**		
Down Day	**(30, 31) October—(7, 8)+(14, 15)+(21. 22) November**			**8**

Table 2. Large Boat Utilization Summary for the First PMRF Test Period

7.3. Lihue Airport—Period 2 (4 January through 29 January)

1. Start Deploying Targets on 5 January
2. This requires a Transit Oahu to the East side of Kauai on 4 January*.
3. Continue operations 5 days a week through 29 January.
4. Transit from Kauai to Oahu 30 January.
5. Three (3) deployment (Navy/Contractor) personnel.

*Note: there is uncertainty at this time regarding plans for 29 January may require more time at Lihue or PMRF depending on Data collection progress at that time

The Large Boat Support required for this period is summarized in Table 3 below:

Boat Operation	Dates	Total Count		
		Data Col.	Transit	Down Day
Transit	**Total transits**		**2**	
Data Collection	**(5-8)+(11-15)+ (18-22)+(25-28) January**	**18**		
Down Day	**(9, 10) +(16, 17)+(23, 24) January**			**6**

Table 3. Large Boat Utilization Summary for the second Lihue test period.

7.4 Estimated Summary of the Shore Test Large Boat Requirements

Table 4 summarizes the estimated total Large Boat Requirements.

Boat Operation	Dates	Total Count		
		Data Col.	Transit	Down Day
Transit	**Total**		**4 &1/4**	
Data Collection	**August through January**	**80**		
Down Day	**August through January**			**32**

Table 4. Large Boat Utilization Summary for the second Lihue test period.

7.5. OPTION - OPNAV ZIRCON III—Period (1 November through 15 December)

1. Start Deploying Targets for 5.5 days between 1 Nov 2009 through 15 December and be on standby to redistribute targets. The large boat used for deploying will need to be available 24 hours per day during this time period.
2. Up to Ten (10) deployment (Navy/Contractor) personnel will be ship riders during this period.
3. Mooring of Wave Rider Buoy could possibly be a task asked for by the sponsor.

*Note: there is uncertainty at this time regarding plans for target support from 1 November through 15 December which may require postponing event until January.

The Large Boat Support required for this period is summarized in Table 5 below:

Boat Operation	Dates	Total Count		
		Data Col.	Transit	Down Day
Transit	**Total transits**		**1**	
Data Collection	**1 Nov – 15 Dec**	**6**		
Down Day				**0**

Table 5. Large Boat Utilization Summary for Optional ZIRCON deployment